February 1, 2000

Mr. Robert E. Heskett
Bemis Company, Inc.
1350 North Fruitridge Avenue
PO Box 905
Terre Haute, IN 47808-0905

Re: Significant Source Modification No:
167-11568-00033

Dear Mr. Heskett:

Bemis Company, Inc. applied for a Part 70 operating permit on June 24, 1996 for plastic film processing and printing operations. An application to modify the source was received on October 22, 1999. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

1. Windmoeller & Hoelscher Astraflex eight color flexographic printing press, identified as Press 31, with a maximum print width of 61 inches and a maximum line speed of 1100 feet per minute, using catalytic incineration as control, and primarily exhausting to stack I-11.

2. Windmoeller & Hoelscher Astraflex eight color flexographic printing press, identified as Press 32, with a maximum print width of 61 inches and a maximum line speed of 1100 feet per minute, using catalytic incineration as control, and primarily exhausting to stack I-11.

3. Dec-E-Tec model CI-Eagle 12,750-HT HE 65 Catalytic Incinerator, identified as Unit 11 (or I-11), with a maximum supplemental fuel burner capacity of 3.5 million BTU per hour (utilizing natural gas), a minimum inlet temperature to the oxidizing zone of 500 EF, and a maximum air flow rate of 12,925 acfm. This unit exhausts to stack I-11.

The proposed Significant Source Modification approval will be incorporated into the pending Part 70 permit application pursuant to 326 IAC 2-7-10.5(l)(3). If there are no changes to the proposed construction of the emission units, the source may begin operating on the date that VCAPC and IDEM receive an affidavit of construction pursuant to 326 IAC 2-7-10.5(h). If there are any changes to the proposed construction the source can not operate until an Operation Permit Validation Letter is issued.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter call 812-462-3433 ask for Rob Harmon or extension 14.

Sincerely,

George M. Needham, Director
Vigo County Air Pollution Control

Attachments
RKH
cc: Mindy Hahn - IDEM-OAM, Permit Branch
Winter Bottum - IDEM-OAM

PART 70 SIGNIFICANT SOURCE MODIFICATION
OFFICE OF AIR MANAGEMENT
and
VIGO COUNTY AIR POLLUTION CONTROL

Bemis Company, Inc.
1350 North Fruitridge Ave.
Terre Haute, Indiana 47804

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Source Modification No.: 167-11568-00033	
Issued by: George M. Needham, Director Vigo County Air Pollution Control	Issuance Date:

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SECTION A SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) and Vigo County Air Pollution Control (VCAPC). The information describing the emission units contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary flexible packaging production facility that includes extrusion of polyethylene film, converting, and printing operations.

Responsible Official:	Robert E. Heskett
Source Address:	1350 North Fruitridge Ave., Terre Haute, Indiana 47804
Mailing Address:	P.O. Box 905, Terre Haute, Indiana 47808
Phone Number:	(812) 466-2213
SIC Code:	2673 and 3079
County Location:	Vigo County
County Status:	Maintenance for SO_2 Attainment for all other criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD Rules

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to construct and operate the following emission units and pollution control devices:

(a) Windmoeller & Hoelscher Astraflex eight color flexographic printing press, identified as Press 31, with a maximum print width of 61 inches and a maximum line speed of 1100 feet per minute, using catalytic incineration as control, and primarily exhausting to stack I-11.

(b) Windmoeller & Hoelscher Astraflex eight color flexographic printing press, identified as Press 32, with a maximum print width of 61 inches and a maximum line speed of 1100 feet per minute, using catalytic incineration as control, and primarily exhausting to stack I-11.

(c) Dec-E-Tec model CI-Eagle 12,750-HT HE 65 Catalytic Incinerator, identified as Unit 11 (or I-11), with a maximum supplemental fuel burner capacity of 3.5 million BTU per hour (utilizing natural gas), a minimum inlet temperature to the oxidizing zone of 500 EF, and a maximum air flow rate of 12,925 acfm. This unit exhausts to stack I-11.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

SECTION B GENERAL CONSTRUCTION CONDITIONS

B.1 Permit No Defense [IC 13]

This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions [326 IAC 2-7-1]

Terms in this approval shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2 and 326 IAC 2-7 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

B.4 Revocation of Permits [326 IAC 2-1.1-9(5)][326 IAC 2-7-10.5(i)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.5 Significant Source Modification [326 IAC 2-7-10.5(h)]

This document shall also become the approval to operate pursuant to 326 IAC 2-7-10.5(h) when, prior to start of operation, the following requirements are met:

(a) The attached affidavit of construction shall be submitted to Vigo County Air Pollution Control (VCAPC), verifying that the emission units were constructed as proposed in the application. The emissions units covered in the Significant Source Modification approval may begin operating on the date the affidavit of construction is postmarked or hand delivered to VCAPC if constructed as proposed.

(b) If actual construction of the emissions units differs from the construction proposed in the application, the source may not begin operation until the source modification has been revised pursuant to 326 IAC 2-7-11 or 326 IAC 2-7-12 and an Operation Permit Validation Letter is issued.

(c) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

(d) The Permittee shall receive an Operation Permit Validation Letter from the Director of Vigo County Air Pollution Control (VCAPC) and attach it to this document.

However, in the event that the Title V application is being processed at the same time as this application, the following additional procedures shall be followed for obtaining the right to operate:

(1) If the Title V draft permit has not gone on public notice, then the change/addition covered by the Significant Source Modification will be included in the Title V draft.

(2) If the Title V permit has gone thru final EPA proposal and would be issued ahead of the Significant Source Modification, the Significant Source Modification will go thru a concurrent 45 day EPA review. Then the Significant Source Modification will be incorporated into the final Title V permit at the time of issuance.

(3) If the Title V permit has not gone thru final EPA review and would be issued after the Significant Source Modification is issued, then the Modification would be added to the proposed Title V permit, and the Title V permit will issued after EPA review.

B.6 Local Agency Requirement

This permit shall also be considered to be the local permit, a separate application and approval is not required.

SECTION C GENERAL OPERATION CONDITIONS

C.1 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

(a) Where specifically designated by this approval or required by an applicable requirement, any application form, report, or compliance certification submitted under this approval shall contain certification by a responsible official of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, on the attached Certification Form, with each submittal.

(c) A responsible official is defined at 326 IAC 2-7-1(34).

C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this approval, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety days after issuance of this approval, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

And

Vigo County Air Pollution Control
103 South 3rd Street
Terre Haute, Indiana 47807

(b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) PMP's shall be submitted to IDEM, OAM and VCAPC, upon request and shall be subject to review and approval by IDEM, OAM and VCAPC. IDEM, OAM and VCAPC, may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this approval.

(b) Any application requesting an amendment or modification of this approval shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

And

Vigo County Air Pollution Control
103 South 3rd Street
Terre Haute, Indiana 47807

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34) only if a certification is required by the terms of the applicable rule

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

C.4 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this approval:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.5 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided in this approval, all air pollution control equipment listed in this approval and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

Testing Requirements [326 IAC 2-7-6(1)]

C.6 Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]

(a) Compliance testing on new emission units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this approval, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAM and VCAPC

A test protocol, except as provided elsewhere in this approval, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

And

Vigo County Air Pollution Control
103 South 3rd Street
Terre Haute, Indiana 47807

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

(b) All test reports must be received by IDEM, OAM and VCAPC within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAM and VCAPC, if the source submits to IDEM, OAM and VCAPC, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.7 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Compliance with applicable requirements shall be documented as required by this approval. All monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of approval issuance. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

Vigo County Air pollution Control
103 South 3rd Street
Terre Haute, Indiana 47807

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

C.8 Temperature Measurement Specifications

Whenever a condition in this permit requires the measurement of temperature in part of the unit or its control device, the device employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.9 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-7-5][326 IAC 2-7-6] [326 IAC 1-6]

(a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:

(1) This condition;

(2) The Compliance Determination Requirements in Section D of this approval;

(3) The Compliance Monitoring Requirements in Section D of this approval;

(4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this approval; and

(5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this approval. CRP's shall be submitted to IDEM, OAM and VCAPC upon request and shall be subject to review and approval by IDEM, OAM and VCAPC. The CRP shall be prepared within ninety (90) days after issuance of this approval by the Permittee and maintained on site, and is comprised of :

(A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this approval; and

(B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.

(b) For each compliance monitoring condition of this approval, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the approval unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.

(c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:

(1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the approval conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the approval, and such request has not been denied or;

(3) An automatic measurement was taken when the process was not operating; or

(4) The process has already returned to operating within "normal" parameters and no response steps are required.

(d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

C.10 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this approval exceed the level specified in any condition of this approval, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM and VCAPC, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. IDEM, OAM and VCAPC shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM and VCAPC within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM and VCAPC reserve the authority to use enforcement activities to resolve noncompliant stack tests.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM and VCAPC that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM and VCAPC may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate approval conditions may be grounds for immediate revocation of the approval to operate the affected facility.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.11 Monitoring Data Availability [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)]

(a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this approval shall be performed at all times the equipment is operating at normal representative conditions.

(b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this approval is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this approval.

(c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.

(d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.

(e) At its discretion, IDEM and VCAPC may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.

(f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.12 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

(a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM and VCAPC, representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or VCAPC makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or VCAPC within a reasonable time.

(b) Records of required monitoring information shall include, where applicable:

(1) The date, place, and time of sampling or measurements;

(2) The dates analyses were performed;

(3) The company or entity performing the analyses;

(4) The analytic techniques or methods used;

(5) The results of such analyses; and

(6) The operating conditions existing at the time of sampling or measurement.

(c) Support information shall include, where applicable:

(1) Copies of all reports required by this approval;

(2) All original strip chart recordings for continuous monitoring instrumentation;

(3) All calibration and maintenance records;

(4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this approval, and whether a deviation from an approval condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.

(d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of approval issuance.

C.13 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

(a) The reports required by conditions in Section D of this approval shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

And

Vigo County Air Pollution Control
103 South 3rd Street
Terre Haute, Indiana 47807

(b) Unless otherwise specified in this approval, any notice, report, or other submission required by this approval shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM and VCAPC, on or before the date it is due.

(c) Unless otherwise specified in this approval, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period. The report does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(d) The first report shall cover the period commencing on the date of issuance of this approval and ending on the last day of the reporting period.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(a) Windmoeller & Hoelscher Astraflex eight color flexographic printing press, identified as Press 31, with a maximum print width of 61 inches and a maximum line speed of 1100 feet per minute, using catalytic incineration as control, and primarily exhausting to stack I-11.

(b) Windmoeller & Hoelscher Astraflex eight color flexographic printing press, identified as Press 32, with a maximum print width of 61 inches and a maximum line speed of 1100 feet per minute, using catalytic incineration as control, and primarily exhausting to stack I-11.

(c) Dec-E-Tec model CI-Eagle 12,750-HT HE 65 Catalytic Incinerator, identified as Unit 11 (or I-11), with a maximum supplemental fuel burner capacity of 3.5 million BTU per hour (utilizing natural gas), a minimum inlet temperature to the oxidizing zone of 500 EF, and a maximum air flow rate of 12,925 acfm. This unit exhausts to stack I-11.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Volatile Organic Compounds (VOCs) Use

The VOC content delivered to the two printing presses (press 31 and press 32) combined shall not exceed 386.5 tons per 12-month period, rolled monthly. This condition, in combination with the capture and destruction efficiency requirements, result in the addition of these presses not being subject to the provisions of 326 IAC 2-2 (Prevention of Significant Deterioration).

D.1.2 Volatile Organic Compounds (VOCs) [326 IAC 8-5-5]

The two printing presses (press 31 and press 32) shall be constructed and operated in such a manner to attain and maintain a 100% VOC capture efficiency. This condition will also satisfy the requirements of 326 IAC 8-5-5 (Graphic Arts Operations) which requires a minimum 60% capture efficiency for flexographic printing.

The incinerator (Unit 11) shall maintain a minimum destruction efficiency of 95%. This condition will also satisfy the requirements of 326 IAC 8-5-5 (Graphic Arts Operations) which requires either a minimum destruction efficiency of 90% or solvent content limitations.

This condition, in combination with the VOC use limitation above, result in the addition of these presses not being subject to the provisions of 326 IAC 2-2 (Prevention of Significant Deterioration).

D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.1.4 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

Within sixty (60) days after achieving maximum production rates, but no later than 180 days after initial start-up, the Permittee shall perform VOC capture efficiency tests on both printing presses, as well as a destruction efficiency test on the incinerator, utilizing standard methods from 40 CFR 60 Appendix A, or other methods as approved by the IDEM, OAM and VCAPC. These tests shall be performed at least once every five years from the date of this valid compliance demonstration. In addition to these requirements, IDEM, OAM and VCAPC may require compliance testing when

necessary to determine if the facilities are in compliance. This testing shall also meet the requirements, including notifications, of Condition C.6 of this permit and 326 IAC 3-6.

D.1.5 Volatile Organic Compounds (VOC)

Compliance with the VOC usage limitations contained in Condition D.1.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer. IDEM, OAM and VCAPC, reserve the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.1.6 VOC Emissions

Compliance with Condition D.1.1 shall be demonstrated within 30 days of the end of each month based on the total volatile organic compound usage for the most recent twelve (12) month period.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.7 VOC Control

The catalytic incineration system shall be in use any time the printing presses are in operation. When operating the catalytic incinerator shall maintain a minimum catalyst bed inlet temperature of 500 EF in order to ensure the minimum 95% VOC destruction efficiency is attained. A record of the required incinerator temperature shall be maintained.

D.1.8 Incinerator Ganging

Incinerator I-11, along with existing incinerators I-9 and I-10, are each designed to handle 12, 750 acfm of solvent laden air. Existing incinerators I-5, I-6, I-7 and I-8 are each designed to handle 8,500 acfm. These incinerators are considered to be combined with the following restrictions:

(a) Before any of the affected presses (presses 19 through 32) can operate, one incinerator shall be warmed up, and operational;

(b) Existing presses 19 through 26 are each rated at 4250 acfm. Existing presses 27 through 30, as well as presses 31 and 32 are each rated at 6375 acfm. The combined airflow (acfm, using the rated capacities) of all the presses in operation shall not exceed the combined rated airflow (acfm) of the incinerators that are in operation at any time.

(c) In the event that the currently operating incinerators are at their maximum input airflow, one (1) additional incinerator shall be warmed up and on standby (if available).

(d) In the event that an incinerator fails, for any reason, the presses that incinerator was handling shall immediately be shut down. They can be restarted as soon as additional incineration capacity is brought online or by shutting other presses down.

(e) A log of all such occurrences shall be kept and made available to Vigo County Air Pollution Control (VCAPC) and the Office of Air Management (OAM) upon request. The log shall contain, as a minimum, the date and time of the occurrence, a description of the occurrence, and a description of the corrective action(s).

D.1.9 Previous Permit Amendment

In order to maintain the permit consistency and integrity regarding the incinerator ganging system, Condition D.1.8 replaces the following conditions in these other permits or approvals which are specified in this condition. The affected permits/conditions are:

(a) Operation Condition number 16 on Construction Permit 167-V014-00033;

(b) Amendment A167-V006-00033;

(c) Operating Conditions number 7 and number 8 on Construction Permit CP-84-1896;

(d) Special Conditions and Timetables number 6 and number 7 on Operating Permit 33-2673-06-93;

(e) Operating Conditions number 9 and number 10 on Construction Permit CP-167-2146;

(f) Special Conditions and Timetables number 6 and number 7 on Operating Permit 33-2673-07-93;

(g) Operation Conditions number 7 and number 8 on Construction Permit CP-167-3392;

(h) Special Conditions and Timetables number 6 and number 7 on Operating Permit 33-2673-08-95.

D.1.10 Monitoring

The Permittee shall conduct quarterly inspections of all components relating to the capture system. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

The Permittee shall also conduct annual sampling and testing of the catalyst utilized in the catalytic incinerator in order to determine if it has reached a point where the effectiveness is diminished to a point where compliance with the minimum destruction efficiency is at risk. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.11 Record Keeping Requirements

(a) To document compliance with Condition D.1.1**,** the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits established in Condition D.1.1.

(1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;

(2) A log of the dates of use;

(3) The volume weighted VOC content of the coatings used for each month;

(4) The cleanup solvent usage for each month;

(5) The total VOC usage for each month; and

(6) The weight of VOCs emitted for each compliance period.

(b) To document compliance with Condition D.1.7 and Condition D.1.8, records of each press and each incinerator operating times shall be kept. These records shall be in a format sufficient to demonstrate compliance with the conditions, and shall also include a specific listing of times that printing operations were interrupted (including the reasons) due to

incinerator related problems. Finally, a certification that each incinerator was operated at no less than than the minimum permitted catalyst inlet bed temperature at all times it was in operation shall be included, unless this was not the case. If the incinerator was ever below the minimum temperatures then a detailed explanation shall be included.

(c) To document compliance with Condition D.1.10, the Permittee shall maintain records of each inspection or sample. These records shall include, as a minimum, dates, initials of the person performing the inspection or taking the sample, results, and corrective actions (if required).

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.12 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1 and D.1.7 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION
and
VIGO COUNTY AIR POLLUTION CONTROL

PART 70 SOURCE MODIFICATION CERTIFICATION

Source Name: Bemis Company, Inc.
Source Address: 1350 North Fruitridge Ave, Terre Haute, Indiana 47804
Mailing Address: PO Box 905, Terre Haute, Indiana 47808
Source Modification No.: 167-11568-00033

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this approval.

Please check what document is being certified:

9 Test Result (specify) _____

9 Report (specify) _____

9 Notification (specify) _____

9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION
and
VIGO COUNTY AIR POLLUTION CONTROL

Part 70 Source Modification Quarterly Report

Source Name: Bemis Company, Inc
Source Address: 1350 North Fruitridge Ave., Terre Haute, Indiana 47804
Mailing Address: PO Box 905, Terre Haute, Indiana 47808
Source Modification No.: 167-11568-00033
Facility: Press 31 and Press 32, Incinerator I-11
Parameter: Combined VOC input, inlet catalyst bed temperature
Limit: 386.5 tons of VOC per 12-month period, 500 EF minimum

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Catalyst bed inlet temperature was maintained at the minimum whenever the associated printing presses were in operation.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Indiana Department of Environmental Management
Office of Air Management
and
Vigo County Air Pollution Control

Technical Support Document (TSD) for a Part 70 Significant Source Modification.

Source Background and Description

Source Name:	**Bemis Company, Inc.**
Source Location:	**1350 N. Fruitridge Ave., Terre Haute, Indiana 47804**
County:	**Vigo**
SIC Code:	**2673 and 3079**
Operation Permit No.:	**T167-6182-00033**
Operation Permit Issuance Date:	**Not Issued Yet**
Significant Source Modification No.:	**167-11568-00033**
Permit Reviewer:	**Rob Harmon**

The Office of Air Management (OAM) and Vigo County Air Pollution Control (VCAPC) have reviewed a modification application from Bemis Company, Inc. relating to the construction of the following emission units and pollution control devices:

(a) Windmoeller & Hoelscher Astraflex eight color flexographic printing press, identified as Press 31, with a maximum print width of 61 inches and a maximum line speed of 1100 feet per minute, using catalytic incineration as control, and primarily exhausting to stack I-11.

(b) Windmoeller & Hoelscher Astraflex eight color flexographic printing press, identified as Press 32, with a maximum print width of 61 inches and a maximum line speed of 1100 feet per minute, using catalytic incineration as control, and primarily exhausting to stack I-11.

(c) Dec-E-Tec model CI-Eagle 12,750-HT HE 65 Catalytic Incinerator, identified as Unit 11 (or I-11), with a maximum supplemental fuel burner capacity of 3.5 million BTU per hour (utilizing natural gas), a minimum inlet temperature to the oxidizing zone of 500 EF, and a maximum air flow rate of 12,925 acfm. This unit exhausts to stack I-11.

History

On October 22, 1999, Bemis Company, Inc. submitted an application to the OAM and VCAPC requesting to add two additional printing presses and a related catalytic incinerator to their existing plant. Bemis Company, Inc. applied for a Part 70 permit on June 24, 1996. This permit has not yet been issued, but the information in this application will be incorporated into that application.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
I-11	Catalytic Incinerator Stack	50	2.83	12,925 *	385E *

* indicates that those values are variable based on the solvent load, temperature of catalytic reduction, and the efficiency of the heat exchanger.

Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on October 22, 1999.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (pages 1 through 4)

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	0.03
PM-10	0.12
SO_2	0.01
VOC	386.58
CO	1.29
NO_x	1.53

Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 (Minor or Significant) Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(g) because the potential VOC emissions are greater than 25 tons per year. This approval will be for both construction and operation of the specified facilities.

County Attainment Status

The source is located in Vigo County.

Pollutant	Status
PM-10	attainment
SO_2	maintenance
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the

formation of ozone. Therefore, VOC and NO_X emissions are considered when evaluating the rule applicability relating to the ozone standards. Vigo County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Vigo County has been classified as attainment or unclassifiable for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	less than 100
PM-10	less than 100
SO_2	less than 100
VOC	greater than 250
CO	less than 100
NOx	less than 100

This existing source is a major stationary source because an attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.

These emissions are based upon the 1999 Emission Statement which reflects 1998 actual emissions.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	HAPs
Printing Presses 31 and 32				19.32			
Incineration Fuel Use (supplement)	0.03	0.12	0.01	0.08	1.29	1.53	NA
Total	0.03	0.12	0.01	19.41	1.29	1.53	NA
PSD Significant Threshold	25	15	40	40	100	40	Variable

Significant ?	N	N	N	N	N	N	NA

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

The limitation utilized in this calculation was required use of the control equipment at all times that the printing operations are in operation. This control equipment shall attain and maintain at least 100% capture efficiency and 95% destruction efficiency. However, since an alternate method was used to calculate PTE (specific description appears on Page 1 of 4 of TSD Appendix A, basically a bottleneck type calculation where the maximum linespeed and maximum solvent loading can not occur at the same time) the maximum solvent use provided in the application, and used as a basis for these calculations, will also be included as a limit. This limitation would be 386.5 tons of VOC input to the two presses (press 31 and press 32) combined during any 12 month period, rolled monthly.

Federal Rule Applicability

(a) These 2 printing presses are not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.430, Subpart QQ), due to the type of printing. Bemis Company, Inc. utilizes flexographic printing, and this NSPS is specifically for publication rotogravure printing.

(b) These 2 printing presses are not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), Subpart KK (326 IAC 14 and 40 CFR Part 63) due to the fact that they are not a major source of hazardous air pollutants (HAP).

State Rule Applicability - Individual Facilities

326 IAC 8-5-5 (Graphic Arts Operations)

Pursuant to 326 IAC 8-5-5(e) (Graphic Arts Operations), the minimum capture efficiency is 60% for flexographic operations. Additionally, Bemis is not required to meet the solvent VOC content limitations in 326 IAC 8-5-5(c) because the design destruction efficiency is above the 90% minimum specified in 326 IAC 8-5-5(c)(3)(C).

Sufficient catalytic incineration capacity shall be in operation at all times the printing presses are in operation, in order to comply with this limit.

Incineration System

Bemis Company has previously applied for, and received, the ability to group the incinerators in Plant II (Which would now include these two new presses and the new incinerator). This grouping (or ganging as they refer to it) allows for additional operational flexibility, ease of maintenance, and reduced natural gas consumption. At the same time this grouping will not reduce the effectiveness of the overall control strategy. Bemis Company would like to have these two (2) new printing presses and the new incinerator incorporated into the grouping system. In order to do that the previous amendment must be updated, along with the seven (7) [four (4) construction and three (3) operating] existing permits which are addressed in that amendment.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the

source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this modification are as follows:

1. The printing presses (and the associated catalytic incinerator) have applicable compliance monitoring conditions as specified below:

   (a) The inlet temperature to the catalyst bed shall be continuously monitored. If the temperature reading begins to drop below the minimum 500 EF, an automated control system shall adjust the operation accordingly. If the temperature can not be maintained, the printing presses relying on this incinerator for control shall be shut down until the inlet temperature can be maintained or the VOC laden emissions stream can be sent to another catalytic incineration unit.

   (b) Annually the catalyst shall be sampled and tested to ensure it is still active. If testing indicates the catalyst can no longer maintain the minimum 95% destruction efficiency at the current minimum temperature then is shall be replaced.

   (c) Quarterly the components of the capture system shall be inspected for proper operation.

   These monitoring conditions are necessary because the catalytic incineration system for the printing presses must operate properly to ensure compliance with 326 IAC 8-5-5 (Graphic Arts Operations) and in order to avoid the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration).

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 167-11568-00033.

Appendix A: Emission Calculations

Bemis Company, Inc.
1350 North Fruitridge Ave., Terre Haute, Indiana 47804
Sig Source Mod: 167-11568-00033
Reviewed By: Rob Harmon
Application Received: October 22, 1999

Bemis Company, Inc. has previously petitioned that their potential would be more accurately be assessed by taking the maximum linespeed and a normal coating rate. This calculation can be checked by taking the maximum coating rate and the normal linespeed of the printing press. Since this method was previously approved and used in several construction permits, I am using it in this case as well.

VOC From Printing Press Operations
Maximum linespeed with the average coating rate case:

Throughput

Press ID	Max line speed (feet per min)	Max print width (inches)	Million square inches per year (MMin^2/Yr)
W&H Astraflex #31	1100	61	423213.12
W&H Astraflex #32	1100	61	423213.12
		total	846426.24

Ink VOCs

Ink Name	Max Coverage (lbs/MMin^2)	Weight % Volatiles	Flash Off (percent)	Throughput (MMin^2/Yr)	Emissions (Ton/Yr)
Fast Solvent	0.14	100.00%	100.00%	846426.24	59.25
Slow Solvent	0.16	100.00%	100.00%	846426.24	67.71
Ink (colors)	0.43	57.00%	100.00%	846426.24	103.73
Ink (High Solids White)	0.7	35.00%	100.00%	846426.24	103.69
N-Propyl Acetate	0.06	100.00%	100.00%	846426.24	25.39
Glycol Ether (propylene)	0	100.00%	100.00%	846426.24	0.00
				Total VOC Emissions (Ton per Year)	359.77

METHODOLOGY

Throughput = Maxium line speed feet per minute * Convert feet to inches * Maximum print width inches * 60 minutes per hour * 8760 hours per year = MMin^2 per Year

VOC = Maximum Coverage pounds per MMin^2 * Weight percentage volatiles (water minus organics) * Flash off * Throughput * Tons per 2000 pounds = Tons per Year

NOTE: HEAT SET OFFSET PRINTING HAS AN ASSUMED FLASH OFF OF 80%. OTHER TYPES OF PRINTERS HAVE A FLASH OFF OF 100%.

(Source -OAQPS Draft Guidance, "Control of Volatile Organic Compound Emisions from Offset Lithographic Printing (9/93))

Appendix A: Emission Calculations

Bemis Company, Inc.
1350 North Fruitridge Ave., Terre Haute, Indiana 47804
Sig Source Mod: 167-11568-00033
Reviewed By: Rob Harmon
Application Received: October 22, 1999

VOC From Printing Press Operations
Maximum linespeed with the average coating rate case:

Throughput

Press ID	Max line speed (feet per min)	Max print width (inches)	Million square inches per year (MMin^2/Yr)
W&H Astraflex #31	760	55	263640.96
W&H Astraflex #32	760	55	263640.96
		total	527281.92

Ink VOCs

Ink Name	Max Coverage (lbs/MMin^2)	Weight % Volatiles	Flash Off (percent)	Throughput (MMin^2/Yr)	Emissions (Ton/Yr)
Fast Solvent	0.22	100.00%	100.00%	527281.92	58.00
Slow Solvent	0.3	100.00%	100.00%	527281.92	79.09
Ink (colors)	0.8	57.00%	100.00%	527281.92	120.22
Ink (High Solids White)	1.3	35.00%	100.00%	527281.92	119.96
N-Propyl Acetate	0.03	100.00%	100.00%	527281.92	7.91
Glycol Ether (propylene)	0.005	100.00%	100.00%	527281.92	1.32
				Total VOC Emissions (Ton per Year)	386.50

METHODOLOGY

Throughput = Maxium line speed feet per minute * Convert feet to inches * Maximum print width inches * 60 minutes per hour * 8760 hours per year = MMin^2 per Year
VOC = Maximum Coverage pounds per MMin^2 * Weight percentage volatiles (water minus organics) * Flash off * Throughput * Tons per 2000 pounds = Tons per Year
NOTE: HEAT SET OFFSET PRINTING HAS AN ASSUMED FLASH OFF OF 80%. OTHER TYPES OF PRINTERS HAVE A FLASH OFF OF 100%.
(Source -OAQPS Draft Guidance, "Control of Volatile Organic Compound Emisions from Offset Lithographic Printing (9/93))

The worst case is the maximum coverage with the average linespeed and print width. Using this worse case both the before and after control potential emissions can be quantified.

386.50	Potential Emissions of VOC (tons per year) before control
100.00%	Capture Efficiency
95.00%	Destruction Efficiency
95.00%	Effective Control Efficiency
19.32	Potential Emissions of VOC (tons per year) after control

METHODOLOGY

Effective Control Efficiency = Capture Efficiency * Destruction Efficiency (both in fraction form)
Pot After Control = Pot Before Control * (1 - Effective Control Efficiency (in fraction form))

Appendix A: Emission Calculations

Bemis Company, Inc.
1350 North Fruitridge Ave., Terre Haute, Indiana 47804
Sig Source Mod: 167-11568-00033
Reviewed By: Rob Harmon
Application Received: October 22, 1999

Potential Emissions from Incinerator Fuel Use

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
3.5	30.7

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see belo	5.5	84.0
Potential Emission in tons/yr	0.03	0.12	0.01	1.53	0.08	1.29

*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

Appendix A: Emission Calculations

Bemis Company, Inc.
1350 North Fruitridge Ave., Terre Haute, Indiana 47804
Sig Source Mod: 167-11568-00033
Reviewed By: Rob Harmon
Application Received: October 22, 1999

Total Potential Emissions Before Control

Facility	PM	PM10	SO2	NOx	VOC	CO
Printing Presses					386.50	
Incinerator Fuel Consumption	0.03	0.12	0.01	1.53	0.08	1.29
Total	0.03	0.12	0.01	1.53	386.58	1.29

Total Potential Emissions After Control

Facility	PM	PM10	SO2	NOx	VOC	CO
Printing Presses					19.32	
Incinerator Fuel Consumption	0.03	0.12	0.01	1.53	0.08	1.29
Total	0.03	0.12	0.01	1.53	19.41	1.29
PSD Significant Threshold	25	15	40	40	40	100
Significant ?	N	N	N	N	N	N